



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/576,034

04/14/2006

Michel Roche

40065

9718

116

7590

12/09/2009

PEARNE & GORDON LLP
1801 EAST 9TH STREET
SUITE 1200
CLEVELAND, OH 44114-3108

EXAMINER

EVANS, GEOFFREY S

ART UNIT

PAPER NUMBER

3742

MAIL DATE

DELIVERY MODE

12/09/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/576,034

Applicant(s)

ROCHE ET AL.

Examiner

Geoffrey S. Evans

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/CD)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. The abstract of the disclosure is objected to because it is unclear which abstract (two were submitted on the same date) is to be used. Correction is required. See MPEP § 608.01(b).

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 13, 17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bull et al. in the article "An electrostatic electron gun for electron beam welding" in view of Brewster in U.S. Patent No. 3,406,304. Bull et al. as shown in figure 1 discloses an electron gun (see title) with an cathode and anode that "are parts of co-axial spherical surfaces (see penultimate line of page 99). Brewster teaches that the anode can also be a sealed window (see element 36, column 3, line 36) that is capable of resisting the pressure differential between the outside environment and an internal vacuum and biasing means (element 26) that set up a pulsed voltage between the anode and the cathode. It would have been obvious to adapt Bull et al. in view of Brewster to provide this to reduce the number of parts by using the anode as the window and to provide biasing means so that electrons are accelerated to form a beam that passes through the anode.

4. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bull et al. in view of Brewster as applied to claim 13 above, and further in view of An in U.S.

Patent Application Publication No. 2002/0014827. An teaches using an emitting layer (element 30) that is heated by heater 32 to emit electrons. It would have been obvious to adapt Bull et al. in view of Brewster and An to provide this as a functionally equivalent method of emitting electrons.

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bull et al. in view of Brewster as applied to claim 13 above, and further in view of Katsap et al. in U.S. Patent No. 6,528,799. Katsap et al. teach using an electron gun to give a kinetic energy of about 100 KeV (see column 5, lines 30-35) in a projection lithography system. It would have been obvious to adapt Bull et al. in view of Brewster and Katsap et al. to provide this so that the electrons have the appropriate energy level for projection lithography.

6. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bull et al. in view of Brewster and An as applied to claim 15 above, and further in view of Sommeria in U.S. Patent No. 3,651,360. Sommeria teaches using electron bombardment from a filament (element 4) to heat a cathode (see column 2, lines 28-30). It would have been obvious to adapt Bull et al. in view of Brewster and Sommeria to provide this as a functionally equivalent method of heating the cathode.

7. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bull et al. in view of Brewster as applied to claim 13 above, and further in view of Kiga et al. in U.S. Patent Application Publication No. 2002/0134946. Kiga et al. teach a window made of a thin metallic sheet for an electron beam apparatus with a thickness of 40 micrometers (see paragraph 5). It would have been obvious to adapt Bull et al. in view

of Brewster and Kiga to provide this so that the anode is thin and transparent to the electrons so that the anode can also optimally function as a window

8. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bull et al. in view of Brewster as applied to claim 13 above, and further in view of Swanson in U.S. Patent No. 3,486,060 and Anderson in U.S. Patent No. 4,788,705. Swanson teaches using a gas flow to cool a window in an electron accelerator. Anderson teaches using a cooling gas flow (element 32, see column 2, lines 38 and 39). It would have been obvious to adapt Bull et al. in view of Brewster, Swanson and Anderson to provide a cooling gas flow to prevent damage to the anode window by cooling the anode window.

9. Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bull et al. in view of Brewster as applied to claim 13 above, and further in view of Robinson in U.S. Patent No. 2,602,751. Robinson teaches using an electron beam to irradiate an object for sterilization. It would have been obvious to adapt Bull et al. in view of Brewster and Robinson to provide this to sterilize objects.

10. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bull et al. in view of Brewster as applied to claim 13 above, and further in view of Schianchi et al. in U.S. Patent No. 6,685,883. Schianchi et al. teaches sterilizing packaging components with an electron beam. It would have been obvious to adapt Bull et al. in view of Brewster and Schianchi et al. to provide this to sterilize packaging components.

11. Applicant's arguments with respect to claims of record have been considered but are moot in view of the new ground(s) of rejection.

12. Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey S. Evans whose telephone number is (571)-272-1174. The examiner can normally be reached on Mon-Fri 7:00AM to 3:30 PM (flexible).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on (571)-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Geoffrey S Evans/

Primary Examiner, Art Unit 3742